

REMARKS/ARGUMENTS

A final rejection was issued on December 20, 2004 concerning the present application in which all of claims 1 through 106 were rejected under 35 U.S.C. 102(a and b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 02/24597, WO 02/24596, or U.S. Patent 4,936,064. Applicants respectfully disagree.

Applicants have previously filed two U.S. patent applications, namely U.S. Serial Nos. 09/871,765 filed June 1, 2001, as well as 09/871,998 filed June 1, 2001. Prior U.S. patent application 09/871,765 filed June 1, 2001 is the same as reference WO 02/24597 and prior U.S. patent application 09/871,998 filed June 1, 2001 is the same as reference WO 02/24596. These two references are thus not proper references inasmuch as the Applicants have claimed the benefit of both applications (09/871,765 and 09/871,998) under 35 U.S.C. §120. In accordance with Section 120 as well as Section 201.11 of the Manual of Patenting Examining Procedure, Applicants have claimed the benefit thereof in the first sentences of the instant U.S. patent application. Further in compliance with 35 U.S.C. §120 and the Manual of Patenting Examining Procedure, the prior applications contain a commonality of inventors; that is the same three inventors of Anthony Mazany, John Robinson, and Craig Cartwright, as in the present application. The content of the prior U.S. applications bearing serial numbers 09/871,765 and 09/871,998 are also contained in the present application. It is furthermore noted that the two prior applications, while having been allowed, are still currently co-pending and naturally were co-pending as of the filing date of February 12, 2004 of the present application.

It is thus respectfully submitted that all aspects of 35 U.S.C. §120 as well as the Manual of Patenting Examining Procedure have been complied with and accordingly reference WO 02/24597 and WO 02/24596 are not proper references.

U.S. Patent 4,936,939 to Woolum relates to graphite fibers, which can have a metal coating, and which are bound together by a slurry of an aqueous alkali silicate and a filler, see Column 4, lines 32-50. The filler can be a powdered ceramic, or a powdered ceramic and powdered metal. Examples of suitable fillers include powdered molybdenum or chromium, with the balance being fused silica powder, that is SiO₂.

Additional filler ceramic materials include powdered aluminum dioxide, finely divided amorphous silica, powdered glass, or a mixture of aluminum dioxide and silicon dioxide.

Considering independent claims 1 and 2, they relate to the reaction product of an alkali silicate, one or more non-silicate network formers and/or a reactive glass. Woolum does not disclose or even suggest non-silicate network formers which comprises an oxoanionic compound such as those set forth in claim 8, for example boric acid, phosphoric acid, and various phosphate salts. Hence it is not pertinent with regard to non-silicate network formers. Woolum does not disclose a reactive acidic glass such as those set forth in claims 14 or claim 16 nor does he have a network modifier as in claims 14 and 17. Hence it is not pertinent with regard to any of claims 1 through 27.

Independent claim 28 relates to a matrix composition of an alkali oxide, silica, non-silicate network formers and/or reactive glass. As noted, Woolum lacks any formation of an alkali oxide, a non-silicate network former, and a reactive acidic glass. Hence it is deemed that claims 28 through 54 are allowable.

Independent claims 55 through 63, 71, and 77 through 82 have been amended to place them in dependent form. These claims generally relate to a reinforcement having an oxophilic character between the polymer matrix and the reinforcement, or relate to various treatments such as chemical oxidation, thermal oxidation, and the like. Inasmuch as they are generally dependent from independent claim 1, or claims 8 and 14, which relate to a non-silicate network former or a reactive acidic glass, which as noted above, Woolum lacks any suggestion thereof, they are allowable.

Claims 64 through 70 relate to a sizing applied to the reinforcement such as various fibers and such sizing can be an organic polymer such as polyvinyl alcohol or an epoxy which Woolum does not teach or suggest. Hence, it is deemed that claims 64 through 70 are allowable.

Independent claim 72 relates to an inorganic polymer matrix composition comprising an alkali silicate and a reactive glass. As set forth on page 11, lines 3-8 of the specification various reactive glass includes phosphoborate glass, etc. and such compounds are not taught or suggested by Woolum. Moreover, claim 76 relates to an acidic oxoanionic compound such as potassium dihydrogen phosphate and the same is

not taught or suggested by Woolum. Hence, claims 72 through 76 are deemed to be allowable.

Dependent claims 83 through 87, as with claims 64-70, relate to the utilization of a sizing compound which comprises an organic polymer, polyvinyl alcohol, epoxy, or glass frit. The Woolum reference does not relate to the utilization of any organic polymers such as polyvinyl alcohol, or epoxy. Upon at least this basis, it is deemed that dependent claims 83 through 87 are allowable.

Claims 88 and 89 and depending from prior discussed claims are allowable for the same reasons set forth with respect thereto.

Independent claims 90 through 94 relate to a reinforced organic polymer matrix comprising a reinforcement and an alkali silicate wherein the reinforcement exhibits an oxophilic character at the matrix-reinforcement interface as a result of a sizing, primer, etc. which is polyvinyl alcohol. The Woolum reference does not relate to any organic polymers and hence is not pertinent.

Independent claim 95 is allowable inasmuch as it claims a phosphoborate glass which is not taught or suggested by Woolum.

Independent claims 96 through 98 relate to a glass composition setting forth various compounds such as phosphorus pentoxide, boron oxide, etc., which the Woolum reference does not teach or suggest.

Claims 99 through 104 depend from claims 94 through 96 and therefore are allowable.

It is deemed that claims 105 and 106 are allowable inasmuch as they depend from allowable claims 1 and 11.

In summary, it is deemed that claims 1 through 106 are allowable.

Claim 106 has been rejected under the first paragraph of 35 U.S.C. 112 and 35 U.S.C. 132 upon the basis that the specification as originally filed does not provide support for the invention as is now claimed. Claim 106 has been amended to state "reinforcing modifying medium is a fiber". Applicants note that on page 19, line 17 of the application, it is stated that reinforcing medium includes various types of fibers, see lines 20-27. Certainly a reinforcing medium such as fibers would modify the properties of the composition and this fact is noted on page 20, line 13 through page 21, line 2.

Improved properties include processing at lower temperatures; improved electrical conductivity, thermal conductivity, and high strength and/or impact resistance; and improved mechanical properties. Hence it is deemed that new matter has not been presented.

Applicants note that the prior obviousness double patenting rejection has been withdrawn in view of the submitted and accepted terminal disclaimer.

Applicants note that German Reference 3,246,604 was not considered because no translation was provided with the Information Disclosure Statement. The U.S. equivalent of the German patent is U.S. Patent 4,533,393 and the same is provided herewith. It is respectfully submitted that it is not pertinent because it does not disclose one or more non-silicate network formers and/or reactive glass as set forth in Applicants' specification.

In view of the above arguments, a formal notice of allowance of claims 1 through 106 is earnestly solicited.

Respectfully submitted,

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